

(1)

December 17, 1957

Dr. Paul R. Burkholder
Brooklyn Botanic Garden
1000 Washington Avenue
Brooklyn 25, N. Y.

Dear Paul:

To yours of the 14th.

I saw a piece in the N. Y. Times a few weeks ago that some Russians were using anaerobic mutants of yeast for anti cancer screening: I'm not much of a Warburgian myself, but who can tell?

Non aerobic (i.e., heme-deficient) mutants of E. coli have been described as mysterious concomitants of the action of streptomycin. Cf: Smith et al., J. Bact. 58:761; Cavalli & Lederberg, Symposium ... copy reference 40 ... and especially Beljanski, M. 1955, C.R.A.S. (Paris) 241:1351, and other papers in C.R. and in Bioch. Bioph. Acta. We played with this a while, and once got a mutant (which we have not kept in stock) but the response was so erratic we gave up trying to work out the mechanism. But probably it is some quirk of selection, giving a heme-auxotroph. Some other "small colony variants" in various organisms may have a similar etiology. Beljanski was with Ochoa at NYU sometime this year, and may still be. If not, he's probably back in Paris at the Pasteur Institute.

You might be able to play similar tricks with Hemophilus under conditions of heme deprivation, per Granick.

I imagine you'll have no problems with petite yeast - let me know if any strains mentioned herein would be especially useful. I have no student just now to recommend.

With best regards and good wishes for the New Year,

Yours sincerely,

Joshua Lederberg
Professor of Medical Genetics

JL/ew